

**New
Generation
PLC**



FT1A Series Smart **AXIS** - Touch

Key Features

- 3.8" (3.7" monochrome) HMI with embedded 12 I/O PLC
- Available in Monochrome or 65K TFT color
- 740 cd/m² monochrome, 400 cd/m² color
- 8 inputs, 4 relay outputs
- Embedded 2pt 0-10V analog input
- 10 Amp Relay contacts
- Embedded Ethernet port
- USB Mini-B Programming Port
- USB Type A port for data logging and recipe functions
- RS232C/RS485 interface
- IP66f (water and oiltight)



General Specifications

Part Numbers	FT1A-C12RA-W	FT1A-C12RA-B	FT1A-C12RA-S	FT1A-M12RA-W	FT1A-M12RA-B	FT1A-M12RA-S
Appearance						
LCD Screen	TFT Color			STN Monochrome		
Bezel Color	Light Gray	Dark Gray	Silver	Light Gray	Dark Gray	Silver
Operating Temperature	0 to +50°C					
Storage Temperature	-20 to +60°C (no freezing)					
Rated Power Voltage	24V DC					
Allowable Voltage Range	20.4 to 28.8V DC (including ripple)					
Maximum Power Consumption	9.2W maximum (when USB2 is not used: 5.8W max.)					
Weight	Approx. 300g					

Display Specifications

Part Number	FT1A-C12RA-*	FT1A-M12RA-*
Display Element	TFT color LCD	STN monochrome LCD
Colors/Shades	65,536 colors	Monochrome 8 shades
Effective Display Area	88.92 W x 37.05 H mm	87.59 W x 35.49 H mm
Display Resolution	240 W x 100 H pixels	
View Angle	Left/right 40°, top 20°, bottom 60°	Left/right/top/bottom: 45°
Contrast Adjustment	Not possible	32 levels
Backlight	LED	LED (white, red, pink)
Backlight Life	50,000 hours ^{Note 1}	
Brightness ^{Note 2}	400 cd/m ²	740 cd/m ²
Brightness Adjustment	32 levels	
Backlight Control	Auto off function	
Backlight Replacement	Not possible	
Graphics	Line, polyline, polygon, rectangle, circle, ellipse, arc, pie, equilateral polygons (3, 4, 5, 6, 8), fill, picture	
Window Display	3 popup screens + 1 system screen	

1. The backlight life refers to the time until the brightness reduces by half after use at 25°C.

2. Brightness of LCD only (monochrome LCD: when lit white).

Specifications can't on next page

Function Specifications

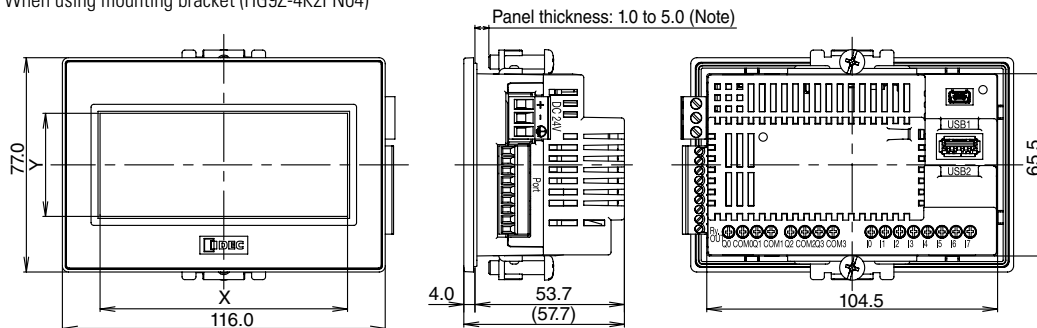
Part Numbers		FT1A-C12RA-*, M12RA-*
Program Capacity		Program size: 48 KB, Configuration memory capacity: 5 MB
Input	Points	8
	Output Points	4
User Program Storage		Flash ROM (100,000 times)
Backup Function	RAM	Backup data: Internal relay, shift register, counter current value, data register ^{Note 1} , clock data (year, month, and day)
	Backup Data	128KB
	Buzzer Output	Single tone (tone length is adjustable)
	Backup Duration	Approx. 30 days (typical) at 25°C after backup battery fully charge
	Battery	Lithium
	Charging Time	Approx. 15 hours for charging from 0% to 90% of full charge
	Battery Life	5 years
	Replaceability	Not possible
Clock Function ^{Note 2}		Clock accuracy: ±30 sec/month (typical) at 25°C
Control System		Stored program system
Instruction Words	Basic Instructions	42
	Advanced Instructions	97
Processing Time	Basic Instruction	1850µs/1000 steps
	END Processing	5 msec minimum
Internal Relay		1024
Shift Register		128
Data Register		2000
Counter (adding, reversible)		200
Timer (1-sec, 100ms, 10ms, 1ms)		200
Input Filter		Without filter, 3 to 15ms (selectable in increments of 1ms)
Catch Input/Interrupt Input	Input Points	4
Self-diagnostic Function		Keep data, Power failure, Clock error, Watchdog timer, Timer/counter preset value change error, User program syntax, User program execution, System error, Memory cartridge transfer error
High-speed Counter	Points	
	Maximum Counter Frequency	Single/two-phase selectable: 1 (5 kHz, multiple 2/4, single-phase cannot be used) Single-phase: 4 (x 10 kHz)
	Counting Range	0 to 4,294,967,295 (32 bits)
	Operation Mode	Rotary encoder mode and adding counter mode
Analog Voltage Input	Points (Terminal No.)	2
	Input voltage Range	0 to 10V DC
	Digital Resolution	10-bit(0 to 1000)
USB Port	USB Standard	USB 2.0
	Connector	Mini-B type
Ethernet Port		1

1. Among data registers D0 to D1999, only D0 to D999 are backed up.

2. Set the calendar/clock using the clock function in WindLDR.

Dimensions (mm)

When using mounting bracket (HG9Z-4K2PN04)

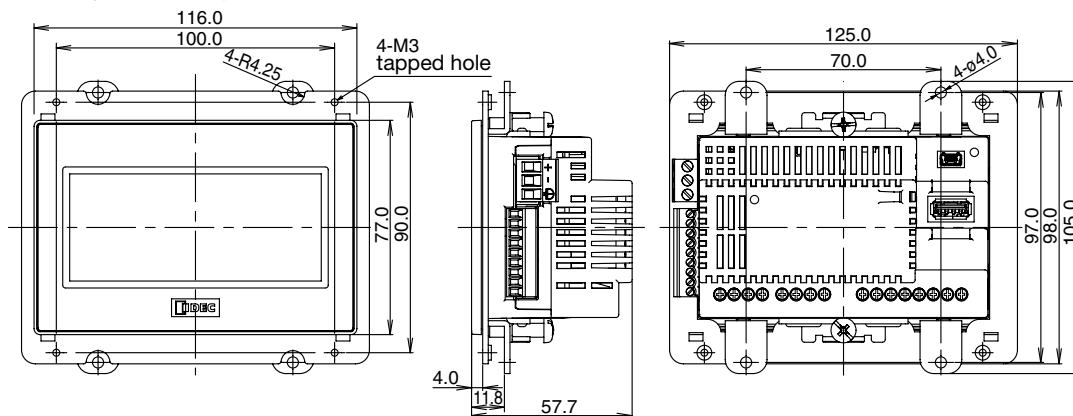


Note: Waterproof characteristic may not be obtained depending on the panel material and size.

LCD Active Area

LCD Type	X	Y
TFT	88.92	37.05
STN	87.59	35.49

When using rear mount adapter (FT9Z-1A01)



Mounting Hole Layout

